

INTERNATIONAL SEARCH REPORT

International application No.
PCT/BR 2005/000005

A. CLASSIFICATION OF SUBJECT MATTER

IPC⁷: B21D 28/28, B23K 26/00, B26F 1/31, E21B 43/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁷: B21D, B23K, B26F, E21B, B01D, B26D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
epodoc, fi cl txte, fi cl txtg, paj

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO2004/001186A1 (COLUMBIA ENGENHARIA LTDA) 31 December 2003 (31.12.2003) <i>the whole document.</i>	1-4
A	US4343358A (GRYSKIEWICZ) 10 August 1982 (10.08.1982) <i>abstract, figures 1-5.</i>	1-4
A	US5059256A (KANAPENAS et al.) 22 October 1991 (22.10.1991) <i>abstract, figures 1, 2.</i>	1-4

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"Z" document member of the same patent family

Date of the actual completion of the international search 10 May 2005 (10.05.2005)	Date of mailing of the international search report 31 May 2005 (31.05.2005)
Name and mailing address of the ISA/ AT Austrian Patent Office Dresdner Straße 87, A-1200 Vienna	Authorized officer BABUREK G.
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP0432958A1 (THE BLACK CLAWSON COMPANY) 19 June 1991 (19.06.1991) <i>abstract, figures 1-9.</i> ---	1-4
A	US2003/0089495A1 (BIXENMANN) 15 May 2003 (15.05.2003) <i>abstract, figures 1-7.</i> ---	1-4

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/BR 2005/000005

Patent document cited in search report		Publication date	Patent family member(s)			Publication date	
EP	A	432958	JP	A	4308294	1992-10-30	
			EP	A1	0432958	1991-06-19	
			CA	C	2029515	1995-06-20	
			US	A	5064537	1991-11-12	
US	A	20030089 495			none		
US	A	4343358	1982-08-10	US	A	4317023	1982-02-23
US	A	5059256	1991-10-22	GB	A	2230222	1990-10-17
				WO	A1	9002628	1990-03-22
				JP	T	3501948T	1991-05-09
				DE	T0	3891388T	1990-11-22
				CH	A5	678028	1991-07-31
WO	A1	20040011 86	2003-12-31	AU	A1	2003238576	2004-01-06
				BR	A	0202468	2004-05-11